

# **A NON-BLOCKING CROSSBAR AND METHOD OF OPERATION THEREOF**

## **ABSTRACT OF THE DISCLOSURE**

A non-blocking crossbar for packet based networks and a method of operation thereof. In one embodiment, the non-blocking crossbar includes: (1)  $n$  inputs,  $n$  numbering at least two, (2)  $n$  outputs, each of the outputs having a destination first-in, first-out buffer (FIFO) and  $n$  crossbar FIFOs interposing corresponding ones of the  $n$  inputs and the destination FIFO, and (3) a scheduler configured to cause a packet to be transmitted from one of the inputs toward one of the outputs only when both the destination FIFO associated therewith and an interposing one of the crossbar FIFOs are available to contain the packet.